



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Fort Frances WPCP
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Fort Frances, Ontario
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November 12, 2020

Town of Fort Frances
320 Portage Avenue
Fort Frances Ontario
P9A 3M5

Attention: Mr. Craig Miller
Environmental Superintendent

Dear Craig:

**Re: Fort Frances Wastewater Treatment Facility
October 2020 Monthly Report**

As per the operating agreement, the attached document is the October 2020 monthly report for the Fort Frances Wastewater Treatment Facility.

The report highlights the influent and effluent quality and the process parameters. Additionally, the routine operation and maintenance activities conducted by the operators are summarized.

If you have any questions regarding this report do not hesitate to contact Mr. Jeff St. Pierre, Regional Hub Manager.

Yours truly,

A handwritten signature in black ink, appearing to read 'Kelly CTD'.

Kelly Cunningham
Team Lead

For Jeff St. Pierre
Regional Hub Manager

**The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
October 2020 Monthly Operations Report**

INTRODUCTION

In accordance with the Agreement between the Ontario Clean Water Agency (Operating Authority) and the Town of Fort Frances, the Fort Frances Sewage Treatment Plant is required to prepare a monthly report. This document covers the reporting month of October 2020; the facility performance report summarizes important information regarding the quality of the effluent, wastewater, analytical test results, maintenance operations, and relevant activities of the WWTP.

DESCRIPTION OF WORKS

Capacity of Works	9000 m ³ /day (average flow)
Service Area	Town of Fort Frances and Couchiching Reserve
Service Population	9000
Effluent Receiver	Rainy River
Major Process	Secondary treatment facility complete with a phosphorus removal system; ultra violet disinfection; aerobic sludge stabilization and dewatering

The Fort Frances Sewage Treatment Plant operates under *Environmental Compliance Approval Number 6786-A44PWG*. The ECA outlines the terms and conditions, and the report captures these terms and conditions in the following sections.

LABORATORY

ALS Laboratory Group – Thunder Bay is contracted to conduct the required analytical tests of the influent (raw) and effluent samples; weekly requirement.

OCTOBER 2020 EFFLUENT QUALITY

<i>Parameters</i>	<i>Monthly Actual Concentration mg/L</i>	<i>Compliance Criteria Concentration mg/L</i>	<i>Performance Objective Concentration mg/L</i>	<i>Monthly Actual Loading, kg/d</i>	<i>Compliance Criteria Loading kg/d</i>	<i>Performance Objective Loading kg/d</i>
CBOD ₅	2.1 mg/L	25 mg/L	15 mg/L	11.6 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	2.3 mg/L	25 mg/L	15 mg/L	13.4 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.13 mg/L	1.0 mg/L	0.9 mg/L	0.75 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	7.43 mg/L 5.28 mg/L					
Total Cl ₂ Residual		<0.01 mg/L (when in use)				
E-Coli		15.7 count/100 ml (geometric mean)		200 count/100ml (geometric mean)		E-coli not to exceed 150 organisms/100ml (monthly geometric mean density)
pH				pH range 6.6 to 7.0; average pH was 6.8		
Temperature degrees C				Temperatures ranged from 13.5 to 16.5 C; average temperature of effluent was 15.4 C		

Compliance criteria are mandatory requirements of the ECA and performance objectives are a goal to be achieved using best reasonable efforts.

WASTEWATER LIQUID PROCESS

The average daily flow for October was 5753.3 m³/day. This represents 64% of the design average flow. Total treated flow for the month was 178352 m³.

The Fort Frances WWTP met all effluent compliance criteria for the parameters listed above and additionally was well within the recommended more stringent monthly performance objectives as outlined in the Environmental Compliance Approval.

MAINTENANCE

The operators performed the routine operations and maintenance at the treatment plant and pumping stations. The activities are highlighted as follows and a summary will be included:

Treatment Plant:

- Alternated lead/lag pumps
- Adjusted fluidizing water to head cell and grit snail as needed
- Greased all blowers
- Regular cleaning of head works EW basket strainer
- Greased Grit Snail and lubricated drive chain
- Monthly inspection of spiral screen access hatch, removed wrapped debris
- Weekly manifold wash and restrictor cleaning on the Fournier press
- Drained and inspected teacup, hosed snail
- Defrosted influent sampler fridge
- Changed oil blowers 3 and 4
- Wiped DO probes

Pump Stations:

- Ran gensets
- Changed seal water strainers
- Replaced battery Fifth Street genset
- Replaced the power supply White Pine PLC
- Genset load tests were completed

PROCESS AND OPTIMIZATION ISSUES

SLUDGE SUMMARY

Dennis Robinson Limited hauled a calculated total of 105.8 m³ (11 bins) of thickened digested sludge to the Town of Fort Frances landfill site. The hauled sludge averaged 15.8 % TS for the month but slump test results from the landfill site have not been provided.

The Fournier press ran for 88.9 hours in the past month.

COMPLAINTS

There were no complaints during the report period.

BYPASS/OVERFLOW REPORT(S)

There were no bypass events in the reporting period.

COMMENTS

Plant power consumption for the month was 461 (x 180 multiplier) kWh.

The Fournier press has been operated 1232.9 hours in 2020.

Boiler inspections were completed.

ESA inspection at the plant and lift stations.

Gensets were load tested.

REPORTS

ALS – Environmental Analytical Reports (on-file at plant)

Fort Frances WPCP Equipment Run Time Report (on-file at plant)

Bypass Report (on-file at plant as per occurrence)

Incident Report (on-file at plant as per occurrence)

2020 Fort Frances Wastewater

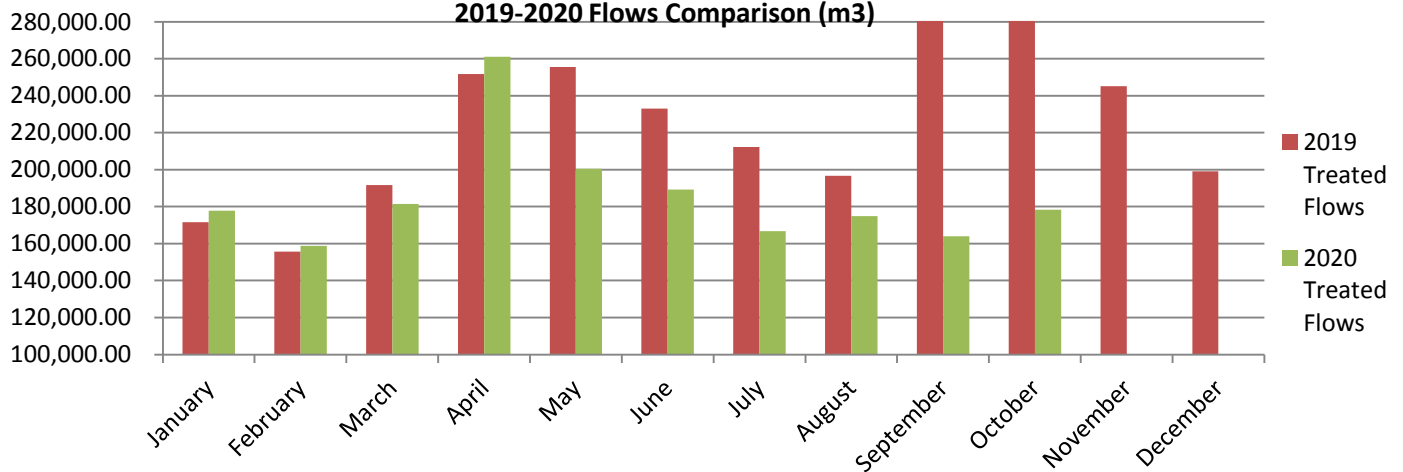
	Sewage Flows Year 2020				Usage	Calculated	Sludge	Removal Efficiency	
Avg. Day	Max Day	Total	Total	Total	% Plant	Volume	Bins	CBOD5	0.966095968
Flow	Flow	Treated	ByPass	Volume	Capacity	Hauled	Hauled	Suspended Solids	0.976268827
m3	m3	Volume ML	Volume ML	ML		M3		Total Phosphorus	0.946092771
5733.8	6060	177747		177747	64%	113.2	12		
5477.0	5861	158832		158832	61%	108.2	11		
5852.1	8845	181415		181415	65%	117.1	12		
8705.3	12162	261159		261159	97%	149.3	15		
6468.6	7612	200528		200528	72%	124.4	12		
6308.4	10580	189252		189252	70%	131.0	13		
5376.8	6039	166681		166681	60%	110.5	11		
5641.0	8831	174870		174870	63%	89.9	9		
5464.9	6696	163947		163947	61%	114.8	11		
5753.3	7408	178352		178352	64%	105.8	11		
					0%				
					0%				
			0	1852783		1164.2	117		
6078		185278		185278	64%	116.4	11.7		
	12162	261159		261159			15		
9000	18000								

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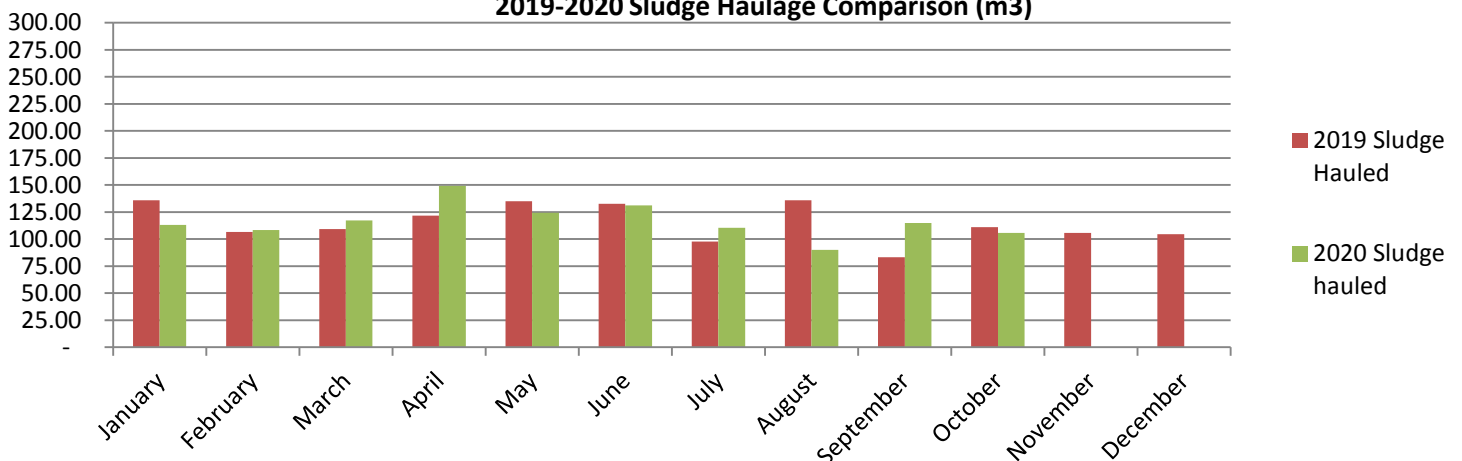
2019-2020 Comparison Chart

Month	2019 Treated Sewage	2020 Treated Sewage	% Variance 2019 to 2020	2019 Hauled Sludge	2020 Hauled Sludge	% Variance 2019 to 2020
	m3	m3	m3	m3 (calculated)	m3 (calculated)	m3
January	171,621.00	177,747.00	3%	136.00	113.20	-17%
February	155,707.00	158,832.00	2%	106.70	108.20	1%
March	191,603.00	181,415.00	-6%	109.20	117.10	7%
April	251,711.00	261,159.00	4%	121.60	149.30	23%
May	255,574.00	200,528.00	-27%	135.00	124.40	-8%
June	233,001.00	189,252.00	-23%	132.60	131.00	-1%
July	212,351.00	166,681.00	-27%	97.70	110.50	13%
August	196,772.00	174,870.00	-13%	136.00	89.90	-34%
September	315,918.00	163,947.00	-93%	83.10	114.80	38%
October	441,076.00	178,352.00	-147%	111.10	105.80	-5%
November	245,097.00		#DIV/0!	105.70		-100%
December	199,047.00		#DIV/0!	104.50		-100%
Totals	2,869,478.00	1,852,783.00	-55%	1,379.20	1,164.20	-16%

2019-2020 Flows Comparison (m3)



2019-2020 Sludge Haulage Comparison (m3)



Workorder Summary Report

Report Start Date: Oct 1, 2020 12:00 AM
Report End Date: Oct 31, 2020 11:59 PM
Location: 1103*
Work Order Type: ADMIN,CALL,CAP,CORR,EMER,OPER,PM
Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
1955791	0000227376	PANEL ALARM/DIALER	1103, Fort Frances WPCP, Process, Process Control & Monitoring	PM	Inspection	1	MONTHS	Critical Alarm/Dialer Testing (1m) 1103	COMP	10/1/20 12:00 AM	10/24/20 11:00 AM	10/24/20 12:00 PM	Dialer Test -We test daily at 11 .
1955795			1103, Fort Frances WPCP	PM	Refurbish/Replace/Repair	1	MONTHS	Diesel Gensets Inspection/Functional Tests (1m) 1103	COMP	10/1/20 12:00 AM	10/27/20 07:31 AM	10/27/20 07:31 AM	Monthly Genset Testing -I ran each genset under load for one hour.
1955811			1103, Fort Frances WPCP	PM	Health and Safety	1	MONTHS	Health And Safety Inspection (1m) 1103	COMP	10/1/20 12:00 AM	10/27/20 07:32 AM	10/27/20 07:32 AM	Monthly H&S -No Issues this month.
1955822			1103, Fort Frances WPCP	PM	Inspection	1	MONTHS	TPM Inspection/Maintenance (1m) 1103	COMP	10/1/20 12:00 AM	11/4/20 03:03 PM	11/4/20 03:03 PM	
1956149			1103, Fort Frances WPCP	PM	Inspection	1	MONTHS	Blowers/Motors Inspection/Service (1m/3m) 1103	COMP	10/1/20 12:00 AM	10/26/20 09:30 AM	10/26/20 11:30 AM	Monthly Blower Maint -I changed oil in blowers 3 & 4 and greased blower 2 & 5 .
1956157	0000246402	CENTRIFUGE GS2-2-1 TEACUP/GRIT SNAIL	1103, Fort Frances WPCP, Process, Primary Treatment, Primary Sludge Degritting	PM	Inspection	1	MONTHS	Teacup Centrifuge Inspection/Service (1m/3m/1y) 1103	COMP	10/1/20 12:00 AM	11/2/20 07:07 AM	11/2/20 07:07 AM	
1956844	0000129813	ANALYZER MONITOR DISSOLVED OXYGEN MAIN BUILDING	1103, Fort Frances WPCP, Process, Process Control & Monitoring, Secondary Treatment	PM	Inspection	6	MONTHS	Analyzer Monitor DO Inspection (6m) 1103	COMP	10/1/20 12:00 AM	10/30/20 01:58 PM	10/30/20 01:58 PM	Analyzer Monitor DO Inspection (6m) 1103 -Cleaned the DO probes, Kelly C
1962733	0000129958	PANEL CONTROL FLOW/ALARM	1103, White Pine Pumping Station, Facility	CALL	Refurbish/Replace/Repair	0		White Pine PLC Failure 1103	COMP		10/24/20 01:30 AM	10/24/20 04:45 AM	White Pine PLC Failure 1103 -I was called by Dale Hughes at 0130 hours on October 24, 2020 to assist with a PLC failure at White Pine lift station. Once we replaced the power supply in the PLC the station returned to proper operation.
1962742	0000129960	PANEL CONTROL PUMP	1103, White Pine Pumping Station, Facility	CALL	Refurbish/Replace/Repair	0		White Pine PLC Failure 1103	COMP		10/24/20 12:20 PM	10/24/20 12:28 PM	White Pine PLC Failure -I arrived at the lift station and noticed plc to be acting different. I then called Kelly in because I could not leave the station due to manual pumping . We then replaced the PLC power supply card and the station came back normal again.